

IN THE CLAIMS

1. (currently amended) A method for fabricating a rotor assembly for a gas turbine engine, said method comprising:

providing a plurality of rotor blades that each include an airfoil, a dovetail, a shank, and a platform, wherein the platform extends between the shank and the airfoil, and wherein the dovetail extends outwardly from the shank, and wherein the shank includes a pair of opposed sidewalls connected together by an upstream rotor blade sidewall and a downstream rotor blade sidewall; and

forming a cooling circuit within a portion of the shank to supply cooling air to the rotor blade for supplying cooling air to the rotor blade through a first opening for impingement cooling a portion of the rotor blade and for supplying cooling air to the rotor blade through a second opening for purging a cavity defined downstream from the rotor blade, wherein the second opening extends through one of the rotor blade downstream sidewall and the rotor blade upstream sidewall.

2. (currently amended) A method in accordance with Claim 1 wherein the shank includes a concave sidewall and a convex sidewall, said forming a cooling circuit within a portion of the shank further comprises:

forming ~~a~~the first opening in the shank concave sidewall for supplying impingement cooling air towards a portion of the rotor blade; and

forming ~~a~~the second opening in the shank convex sidewall for channeling purge air downstream from the rotor blade.

3. (currently amended) A method in accordance with Claim 2 wherein ~~the shank concave and convex sidewalls are connected together at an upstream and a downstream rotor blade sidewall~~, said forming ~~a~~the second opening in the shank convex sidewall further comprises extending the second opening through the rotor blade downstream sidewall such that the second opening is between the rotor blade platform and dovetail.

4. (currently amended) A method in accordance with Claim 2 wherein forming ~~a~~the first opening in the shank concave sidewall further comprises forming the first

opening in the shank concave sidewall such that air discharged from the first opening is channeled towards the platform for impingement cooling the platform.

5. (original) A method in accordance with Claim 1 wherein forming a cooling circuit within a portion of the shank further comprises forming the cooling circuit within the shank to facilitate reducing platform creep during engine operation.

6. (currently amended) A rotor blade for a gas turbine engine, said rotor blade comprising:

a platform;

an airfoil extending radially outward from said platform;

a shank extending radially inward from said platform, said shank comprising a pair of opposed sidewalls coupled together by an upstream sidewall and a downstream sidewall;

a dovetail extending from said shank; and

a cooling circuit comprising a plurality of openings extending through a portion of said shank for supplying cooling air for impingement cooling at least a portion of said rotor blade and for channeling purge air downstream from said rotor blade into a cavity defined within the gas turbine engine, one of said plurality of openings extends through one of said shank upstream sidewall and said shank downstream sidewall.

7. (currently amended) A rotor blade in accordance with Claim 6 wherein ~~said shank comprises a convex sidewall and a concave sidewall coupled together at an upstream side and a downstream side of said rotor blade, said cooling circuit comprising a~~ at least one of said plurality of openings ~~extending~~ extends through at least one of said convex sidewall and said concave sidewall.

8. (original) A rotor blade in accordance with Claim 7 wherein said cooling circuit plurality of openings further comprise a first opening and a second opening, said first opening extending through said shank concave sidewall for directing cooling air for impingement cooling of said platform, said second opening extending through said shank

convex sidewall for directing cooling flow from said shank cavity downstream from said rotor blade.

9. (original) A rotor blade in accordance with Claim 7 wherein said second opening extends between said shank convex sidewall and said rotor blade downstream side.

10. (original) A rotor blade in accordance with Claim 9 wherein said second opening extends through said rotor blade downstream side between said platform and said dovetail.

11. (original) A rotor blade in accordance with Claim 7 wherein said first opening facilitates reducing an operating temperature of said platform.

12. (original) A rotor blade in accordance with Claim 6 wherein said cooling circuit facilitates blade reducing platform creep during engine operation.

13. (currently amended) A gas turbine engine comprising a rotor assembly comprising a plurality of rotor blades coupled to a rotor disk, each of said plurality of rotor blades comprises an airfoil, a dovetail, a shank, and a platform, said platform extending between said shank and said airfoil, said dovetail extending outward from said shank, said shank comprises a pair of opposed sidewalls coupled together by an upstream sidewall and a downstream sidewall, at least one of said plurality of rotor blades further comprises a cooling circuit comprising a plurality of openings extending through said shank for supplying cooling air for impingement cooling a portion of said rotor blade and for supplying purge air downstream from said platform, wherein one of said plurality of openings extends through one of said shank upstream sidewall and said shank downstream sidewall.

14. (currently amended) A gas turbine engine in accordance with Claim 13 wherein each said rotor blade comprises a pressure side and a suction side, said shank comprises a convex sidewall and a concave sidewall connected at ~~an~~ said upstream sidewall and ~~a~~ said downstream sidewall of said rotor blade.

15. (currently amended) A gas turbine engine in accordance with Claim 14 further comprising a buffer cavity downstream from said plurality of rotor blades such that each said rotor blade platform defines a portion of the buffer cavity, said cooling circuit

plurality of openings comprises a first opening and a second opening, said first opening extends through said shank concave sidewall for directing cooling air for impingement cooling a portion of said platform, said second opening extends through said shank convex sidewall for directing cooling flow from said shank cavity into the buffer cavity.

16. (original) A gas turbine engine in accordance with Claim 15 wherein said second opening extends between said shank convex sidewall and said rotor blade downstream sidewall.

17. (original) A gas turbine engine in accordance with Claim 16 wherein said second opening extends through said rotor blade downstream sidewall between said platform and said dovetail.

18. (original) A gas turbine engine in accordance with Claim 16 wherein said second opening facilitates reducing hot flowpath gas ingestion within the buffer cavity.

19. (original) A gas turbine engine in accordance with Claim 15 wherein said first opening facilitates reducing an operating temperature of said rotor blade platform.

20. (original) A gas turbine engine in accordance with Claim 15 wherein said rotor blade cooling circuit facilitates reducing platform creep during engine operation.